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(54) Title: **ALBUMIN FUSION PROTEINS**

(57) Abstract: The present invention encompasses albumin fusion proteins. Nucleic acid molecules encoding the albumin fusion proteins of the invention are also encompassed by the invention, as are vectors containing these nucleic acids, host cells transformed with these nucleic acids vectors, and methods of making the albumin fusion proteins of the invention and using these nucleic acids, vectors, and/or host cells. Additionally the present invention encompasses pharmaceutical compositions comprising albumin fusion proteins and methods of treating, preventing, or ameliorating diseases, disorders or conditions using albumin fusion proteins of the invention.

Antibodies specific for a protein of the invention can be used in alleviating symptoms associated with the disorders mentioned above, and in diagnostic immunoassays e.g., radioimmunoassay or enzyme linked immunosorbent assay (ELISA). The present sequence represents a human secreted protein of the invention.

Sequence 832 AA;

Query Match 18.7%; Score 674.5; DB 22; Length 832;
Best Local Similarity 30.5%; Pred. No. 4.4e-49;
Matches 214; Conservative 90; Mismatches 285; Indels 113; Gaps 28;

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QY 12 SAPARVPGPRLGLRLRLRL-----WAAASAGHLRSGPRIFAVMGKHWG 63
DB 8 AAFGALPPRP-----PLLLLLLLLLQPPPTWALSPLSLPLSGSEERFL----- 55
QY 64 QDRVDFQOTEPHTVLFHEPGSSVWVGGRKVV-----LFDPEGKNAVRYVNIIGSTKG 118
DB 56 --RFEAHSINVTALLSRDGRFTLYGAREALFALSNSLSPGEGYQELMGADAKKQ 113
QY 119 SCLDK-----RDCENYI-TLERRSGLACGTNARHPSGW--NLVNGTV-----VPL 163
DB 114 QCSFKGKDPDPCONTIKILPLSGSHLFTCGTAAPSMTCTYIMENFTLARDKGNVLL 173
QY 164 GEMRGYAPFSPDENSLVLFEGDEYVSTIRKQENKGIPIRRRIKGESELYTSDTV--MON 221
DB 174 EDKGRGCPDPNPKSTALVVDGELY-TGTVSSFGNDPAISRQSILRPTKTESLWMLD 232
QY 222 POFIKATIVHOD-----QAYDDKIYFFREDNPKNEAPLNSRVAGLCGGGGSSLS 277
DB 233 PARVASAYIPESLGGDDDKIYFFSETGGEFFENTYISRIARICGGGGSERVLQ 292
QY 278 VSKWNTFLKAMLVCSDAATKNKFNRLQDVFLLPDPSGQWMDTRVYGVFSNPNVY-----S 332
DB 293 -QRMTEFLKQQLCSRPDGGFPNNVLDVFTLSPSPQDMNDLFTGVFTSQMHRGTBGS 351
QY 333 ANCVTSGLGIDIKVF-----RTSLKGYHSLNPNRPGCLRP--QOPIETEFQVA 381
DB 352 ACVFETMKDQVRFESGLYKVENETQWNTVHPVTPRPGACTINSAREKINSLSIQLP 411
QY 382 DR-----HPEVAORVEMGKLTPFLHSHKYHOKVAVHMQASHGETFHYLYT 430
DB 412 DAVLNFLLKDHFLMDQGVSRMLLP-----QARYORVAVHNTYGLH-HTYDVLFG 462
QY 431 TDRGTHKVEPGEDESHSAFNIMETOPRRRAAIOTMLDERKRLVSSQWESQVPL 490
DB 463 TGDGRLHKAIVSGPRNHT-----IEELQTFSSGQPVONLLDHRGLLYAASHSGVYQVDM 518
QY 491 DLCEYVGGGCGHCLMSRDPYCGMDQGR--ISIYSE--RSVLQSIINAEPRHKRC----- 541
DB 519 ANCSLY-RSCGCLLARBPYCAWSSGSKHVSLYQPOLATRPWIODIDEGASAKDLCSSAS 577
QY 542 ---PWRKP-DKAPLQKVLAPNSRYLLSCPMESRHATYSWRK---ENVEQSCPEGHOSP 594
DB 578 VVSPSEFTYTGKPCQVQVOPQPTVNTLACPLLSNLATRLMLNAPVNASASC---HVLPR 634
QY 595 NCILFIENLTAQOYGHYFC-EAOGESYFREAOHQLLPEDGI 635
DB 635 TGDLL--VGTQQLGEFGCWSLEBFQQLVASTCEPEVEDGV 674
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RESULT 15
ABG64522
ID ABG64522 standard; Protein: 832 AA.
XX ABG64522;
XX
XX 27-AUG-2002 (first entry)
DE Human albumin fusion protein #1197.
XX
XX Albumin fusion protein: therapeutic protein X; human albumin; HA;
KM human serum albumin; HSA; cancer; reproductive disorder;

KW digestive disorder; immune disorder; endocrine disorder;
KW haematopoietic disorder; neural disorder; connective disorder;
KW cytoskeletal; anti-infectivity; anti-inflammatory; anticancer;
KW immunomodulator; anti-HIV; antidiabetic; haemostatic; nocotropic;
KW neuroprotective; antiparkinsonian; antimicrobial; neuroleptic;
XX osteopathic; antiarthritic;
OS Homo sapiens.
OS Synthetic.
PN MO200177137-A1.
PD 18-OCT-2001.
XX
XX 12-APR-2001; 2001WO-US11988.
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XX 12-APR-2000; 2000US-229358P.
XX 25-APR-2000; 2000US-199384P.
XX 21-DEC-2000; 2000US-256931P.
XX
XX (HUMA-) HUMAN GENOME SCI INC.
PI Rosen CA, Haseltine WA.
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XX MPI: 2002-010886/01.
XX

New fusion protein for treating disease e.g. diabetes comprises an albumin fused to a therapeutic protein.
Claim 1; Page 1288-1291; 2102pp; English.

The present invention relates to albumin fusion proteins comprising a therapeutic protein X and human albumin (HA), also known as human serum albumin, HSA). The proteins are useful for treating a disease or disorder that may be modulated by therapeutic protein X. The albumin in vitro/in vivo activity. The protein is useful for increasing its biological activity. The protein is useful for increasing its biological activity and diagnosing disorders such as cancer, reproductive disorders, digestive disorders (e.g. Crohn's disease, ulcerative colitis), immune disorders (e.g. acquired immunodeficiency syndrome, AIDS), endocrine disorders (e.g. diabetes), haematopoietic disorders, neural disorders (e.g. Alzheimer's, Parkinson's, Creutzfeldt-Jacob disease, encephalomyelitis, meningitis, schizophrenia), and connective disorders (e.g. osteoporosis, arthritis). ABG63326-ABG65518 represent albumin fusion proteins of the invention.

Query Match 18.7%; Score 674.5; DB 23; Length 832;
Best Local Similarity 30.5%; Pred. No. 4.4e-49;
Matches 214; Conservative 90; Mismatches 285; Indels 113; Gaps 28;

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QY 12 SAPARVPGPRLGLRLRLRL-----WAAASAGHLRSGPRIFAVMGKHWG 63
DB 8 AAFGALPPRP-----PLLLLLLLLLQPPPTWALSPLSLPLSGSEERFL----- 55
QY 64 QDRVDFQOTEPHTVLFHEPGSSVWVGGRKVV-----LFDPEGKNAVRYVNIIGSTKG 118
DB 56 --RFEAHSINVTALLSRDGRFTLYGAREALFALSNSLSPGEGYQELMGADAKKQ 113
QY 119 SCLDK-----RDCENYI-TLERRSGLACGTNARHPSGW--NLVNGTV-----VPL 163
DB 114 QCSFKGKDPDPCONTIKILPLSGSHLFTCGTAAPSMTCTYIMENFTLARDKGNVLL 173
QY 164 GEMRGYAPFSPDENSLVLFEGDEYVSTIRKQENKGIPIRRRIKGESELYTSDTV--MON 221
DB 174 EDKGRGCPDPNPKSTALVVDGELY-TGTVSSFGNDPAISRQSILRPTKTESLWMLD 232
QY 222 POFIKATIVHOD-----QAYDDKIYFFREDNPKNEAPLNSRVAGLCGGGGSSLS 277
DB 233 PARVASAYIPESLGGDDDKIYFFSETGGEFFENTYISRIARICGGGGSERVLQ 292
QY 278 VSKWNTFLKAMLVCSDAATKNKFNRLQDVFLLPDPSGQWMDTRVYGVFSNPNVY-----S 332
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